



# Primo VE Troubleshooting

Is it Primo? Is Alma? Is it  
something else?

# Abstract

Hear from Primo VE sites all round the world to learn their top tips for troubleshooting Primo VE issues. Sometimes it is tricky to figure out whether the problem is arising in Alma, or is it something you have configured in Primo VE? Sometimes it's just a plain thorny problem to sort out even if you know where to go.

We all need a little help sometimes. If your Library is new to Primo VE, then this session may be especially helpful for you. In a series of lightning talks each presenter will:

- Describe a problem or two they encountered in Primo VE
- Explain how they tracked down the cause
- Reveal the outcome

Troubleshooting stories cover integrations, FRBR and Dedup processes, local fields, custom search boxes and working with external data sources.

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# Institutional Background

## Bond University

Australia's first private non-profit university, Bond University seeks to be recognised internationally as a leading independent university, imbued with a spirit to innovate, a commitment to influence and a dedication to inspire tomorrow's professionals who share a personalised and transformational student experience.

Established: 1989

FTE Students: approx 5000

Staff: approx 1100

1 campus

4 Faculties + 1 Pathways College

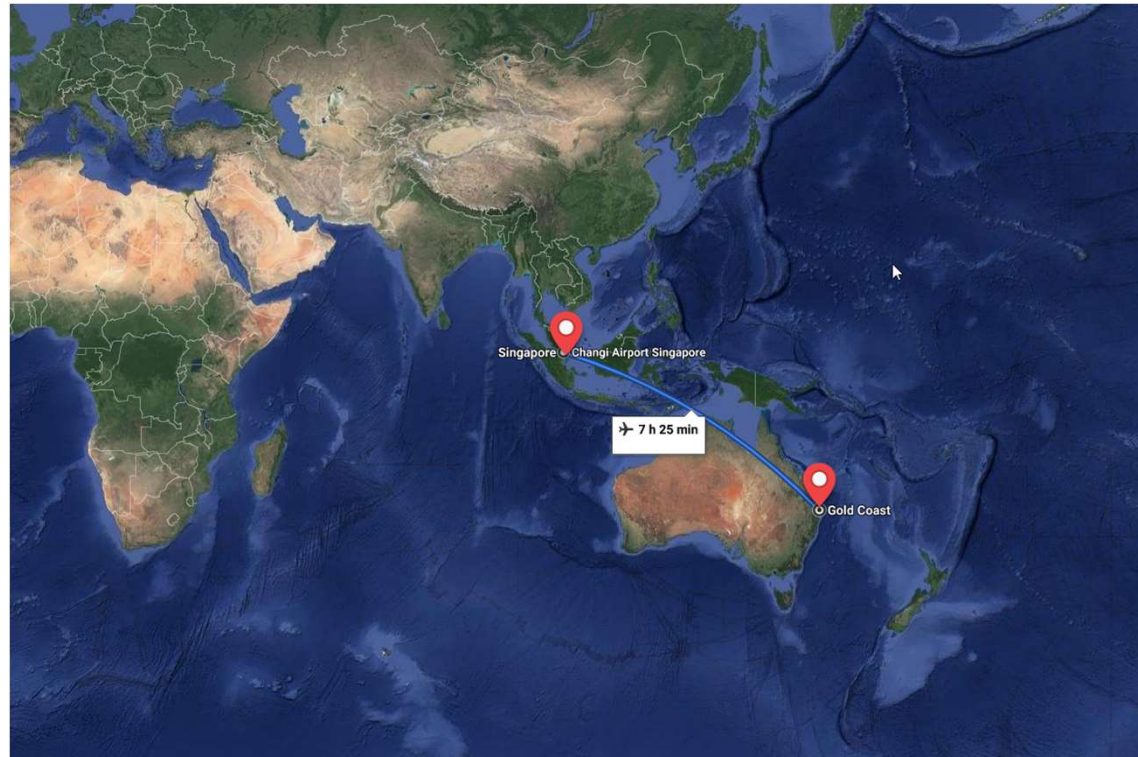
## Library Services

2 libraries + 1 multimedia learning space

30 staff

Ex Libris Products: Aleph (2004-2015); Refworks (a very long time); Alma & Primo (2015); bX (2017); Leganto (2018)

# Where's that?



# What's the problem?

- FRBR/dedup variation between Primo BO and Primo VE & emulating the experience for students in Leganto
    - Print/ebook
    - Editions
    - PCI records (RAMBI collection) eg. [Holocaust-wrought women](#)
  - Total Care customer so no previous visibility of this in Primo BO
    - But we believe that we had dedup disabled
  - Understanding the differences of how it works
  - Impact on workflows/procedures for Information Resources team
    - This team is responsible for acquisitions & cataloguing and checking Primo that frbr/dedup has worked as expected.
-

1



BOOK

### Managing innovation : integrating technological, market and organizational change

Tidd, Joseph, 1960- author.

2018

Managing Innovation is the bestselling text for graduate and undergraduate students and a classic in the field. Emphasizing practical, evidence based tools and resources, this title provides students with the knowledge base to successfully manage innovation, technology, and new product development. The holistic approach addresses the interplay between the markets, technology, and the organization, while relating the unique skill set required to manage innovation and innovation processes. The sixth edition of Managing Innovation continues to include the popular



Author date in new record is being used in the matching key contrary to documentation. Preventing this record from grouping with the existing 2 versions.

[Available Online](#)

2



MULTIPLE VERSIONS

### Managing innovation : integrating technological, market and organizational change

Tidd, Joseph, 1960-; Bessant, J. R.

[2 versions found. See all versions >](#)

6 Results ☐ Personalise

Active filters

List of Versions X


reset

Tweak your results

Sort by Date-newest ▼

1  **Cities on his mind : urban landscapes of Saul Bellow's fiction.**  
Kremer, S.  
Saul Bellow Journal 12,1-2 (2012) 1-20  
PEER-REVIEWED JOURNAL  
[Citation Available >](#)

2  **High art/low life : the human comedy in Saul Bellow's fiction**  
Kremer, S.  
Saul Bellow Journal 10,2 (2002) 70-94  
PEER-REVIEWED JOURNAL  
[Citation Available >](#)

3  **Holocaust survivors : psychiatric and literary parallels**  
Kremer, S.  
Probus 12,2 (1999) 27-34  
On the fiction of Cynthia Ozick and Susan Fromberg-Schaeffer.  
PEER-REVIEWED JOURNAL  
[Citation Available >](#)

4  **Memoir and history : Saul Bellow's old men remembering in "Mosby's Memoirs", "The Old System", and "The Bellarosa Connection".**  
Kremer, S.  
Saul Bellow Journal 12,2 (1994) 44-58  
PEER-REVIEWED JOURNAL  
[Citation Available >](#)

5  **Post-alienation : recent directions in Jewish-American literature.**  
Kremer, S.  
Contemporary Literature 34,3 (1993) 571-591  
PEER-REVIEWED JOURNAL  
[Available Online >](#)

6  **Holocaust-wrought women : portraits by four American writers**  
Kremer, S.  
Studies in American Jewish Literature 11,2 (1992) 150-161  
Analyzes four works of fiction - Susan Fromberg Schaeffer's "Anyia", Cynthia Ozick's "The Shawl", Marge Piercy's "Gone to Soldiers", and Ilona Karmel's "An Estate of Memory" - dealing with the experiences of Jewish women in the Holocaust. Among the recurrent themes are sexual abuse, clandestine childbirth

Appear to be grouped on author alone - Title is not used.



# Investigating

- Documentation - [Understanding the Dedup and FRBR Processes \(Primo VE\)](#)
  - Dedup and FRBR Test Utility (Discovery Configuration)
  - Trial and error
    - Updating records
  - Case - trying to get the answers to:
    - Finding out what triggers FRBRising and dedup. Eg. Will the July indexing recalculate keys?
    - Shouldn't updating a bib record trigger a recalculation without having to also run the job?
    - Why are some keys still hanging on to 100 \$\$\$d?
  - One thing leads to another
    - Saving records in FRBR group
-



## < Dedup and FRBR Test Utility

[Back](#)[Find Matching Records](#)[Compare Records](#)Grouping Type ☒ FRBR ☐ Dedup

Record ID1 \* 9930502471102381

Record ID2 \* 990006319360402381

[Compare](#)

 Keys Match. Records are not connected in DB

Record 1



	Key Text	Key	Matched
1	tidd joseph~managing innovation integrating technological market and organizational change	29966381762346044	✓
2	75144533014379867	90444151318651292...	✗

Record 2



	Key Text	Key	Matched
1	tidd joseph~managing innovation integrating technological market and organizational change	29966381762346044	✓
2	81486193315424681	9031986553703915714	✗

# Solved?

Partially...

1. Ran a job across all print holdings to “not prevent” FRBR/Dedup. That helped with many of the ebook/print books and and some editions.
2. Granted discovery configuration role to some Information Resources team members (cataloguers) so they could get access to the utility
3. Cases pending:
  - a. 00700058 - Recalculating frbr and deup for all titles (sic)
  - b. 00699696 - PCI articles from Rambli incorrectly frbrising
  - c. 00666625 - Saving records from frbr group in Primo VE (Fix coming in September release)

# Top Tip

Use the community list! - share your experiences and knowledge.

Search for and review published Salesforce cases.

Thank you to all those sites who publish their cases!



# Institutional Background

## University of Manitoba

- Established in 1877
- First university in Western Canada
- > 29,000 students
- > 145,000 alumni in 140 countries



# What's the problem?

- Migrated from Primo to Primo VE in 2018 ( December 17th go-live date)

A yellow starburst graphic with multiple points, containing the text about Primo permalinks.

Primo “permalinks” do not  
automatically redirect to Primo VE.



# Investigating

Three types of permalink were used on various platforms (LibGuide, D2L, course materials, etc. ).

## 1. URL as permalink

[https://primo-pmtna01.hosted.exlibrisgroup.com/primo-explore/fulldisplay?docid=UMB\\_ALMA51732914440001651&context=L&vid=UMB&search\\_scope=UManitoba&isFrbr=true&tab=default\\_tab&lang=en\\_US](https://primo-pmtna01.hosted.exlibrisgroup.com/primo-explore/fulldisplay?docid=UMB_ALMA51732914440001651&context=L&vid=UMB&search_scope=UManitoba&isFrbr=true&tab=default_tab&lang=en_US)

## 2. Official permalink

[https://primo-pmtna01.hosted.exlibrisgroup.com/permalink/f/prb665/UMB\\_ALMA21697474150001651](https://primo-pmtna01.hosted.exlibrisgroup.com/permalink/f/prb665/UMB_ALMA21697474150001651)

## 3. Deep link as permalink

[http://primo-pmtna01.hosted.exlibrisgroup.com/primo\\_library/libweb/action/dlSearch.do?institution=UMB&vid=UMB&tab=umb\\_opac&search\\_scope=UManitoba&mode=Basic&group=GUEST&onCampus=true&displayMode=full&query=any,contains,9911822351000165](http://primo-pmtna01.hosted.exlibrisgroup.com/primo_library/libweb/action/dlSearch.do?institution=UMB&vid=UMB&tab=umb_opac&search_scope=UManitoba&mode=Basic&group=GUEST&onCampus=true&displayMode=full&query=any,contains,9911822351000165)

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# Investigating (cont'd)

Auto redirection provided by Ex Libris does not apply to our situation.

[https://knowledge.exlibrisgroup.com/Primo/Product\\_Documentation/020Primo\\_VE/050Other\\_Configuration/Configuring\\_Redirection\\_for\\_Primo\\_VE\\_Deep\\_Links](https://knowledge.exlibrisgroup.com/Primo/Product_Documentation/020Primo_VE/050Other_Configuration/Configuring_Redirection_for_Primo_VE_Deep_Links)

Reason: A record domain was used for Primo ([primo-pmtna01.hosted.exlibrisgroup.com](https://knowledge.exlibrisgroup.com/Primo/Product_Documentation/020Primo_VE/050Other_Configuration/Configuring_Redirection_for_Primo_VE_Deep_Links)) instead of a CNAME record ([my-library.hosted.exlibrisgroup.com](https://knowledge.exlibrisgroup.com/Primo/Product_Documentation/020Primo_VE/050Other_Configuration/Configuring_Redirection_for_Primo_VE_Deep_Links)). The CNAME record can be re-configured to communicate with the Primo VE server.

Solution: update the domain in a permalink URL to use the auto redirection feature.

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# Solution details

- All Primo “permalinks” used on other platforms at the UML need to be manually replaced by the Primo VE ones.
- A javascript uploaded to Primo changed the process of obtaining a Primo VE permalink to two clicks.
- UML asked Ex Libris to keep the old Primo for a while in order for librarians and faculty to complete the update.



# Solution details (cont'd)

To obtain a Primo VE permalink:

- Background: Once an URL is on the Primo VE domain, the auto redirection will change Primo parameters, such as vid, tab, search scope, etc. to the Primo VE version
- User actions:
1. Users click on a Primo permalink to open the item record on Primo
  2. The javascript will retrieve the URL on the above item page, replace the domain by the Primo VE domain without changing the path, and add the new URL as a hyperlink to a highlighted button.
  3. Users click on the highlighted button to open the item record on Primo VE.
  4. Now, the item URL on Primo VE can be used as the Primo VE permalink.
-

# Solution details (cont'd)

To obtain a Primo VE permalink:

Primo permalink: [https://primo-pmtna01.hosted.exlibrisgroup.com/permalink/f/1q3bkt5/UMB\\_ALMA51668712670001651](https://primo-pmtna01.hosted.exlibrisgroup.com/permalink/f/1q3bkt5/UMB_ALMA51668712670001651)

Item URL on Primo: [https://primo-pmtna01.hosted.exlibrisgroup.com/primo-explore/fulldisplay?docid=UMB\\_ALMA51668712670001651&vid=UMB&search\\_scope=University%20of%20Manitoba&tab=default\\_tab&lang=en\\_US&context=L](https://primo-pmtna01.hosted.exlibrisgroup.com/primo-explore/fulldisplay?docid=UMB_ALMA51668712670001651&vid=UMB&search_scope=University%20of%20Manitoba&tab=default_tab&lang=en_US&context=L)

Item URL with Primo VE domain: [https://search.lib.umanitoba.ca/primo-explore/fulldisplay?docid=UMB\\_ALMA51668712670001651&vid=UMB&search\\_scope=University%20of%20Manitoba&tab=default\\_tab&lang=en\\_US&context=L](https://search.lib.umanitoba.ca/primo-explore/fulldisplay?docid=UMB_ALMA51668712670001651&vid=UMB&search_scope=University%20of%20Manitoba&tab=default_tab&lang=en_US&context=L)

Item URL on Primo VE: [https://search.lib.umanitoba.ca/discovery/fulldisplay?vid=01UMB\\_INST:UMB&tab=Everything&docid=alma99148830951401651&context=L&lang=en](https://search.lib.umanitoba.ca/discovery/fulldisplay?vid=01UMB_INST:UMB&tab=Everything&docid=alma99148830951401651&context=L&lang=en)

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# Top Tip

Explain to faculty why the permalinks are not permanent.

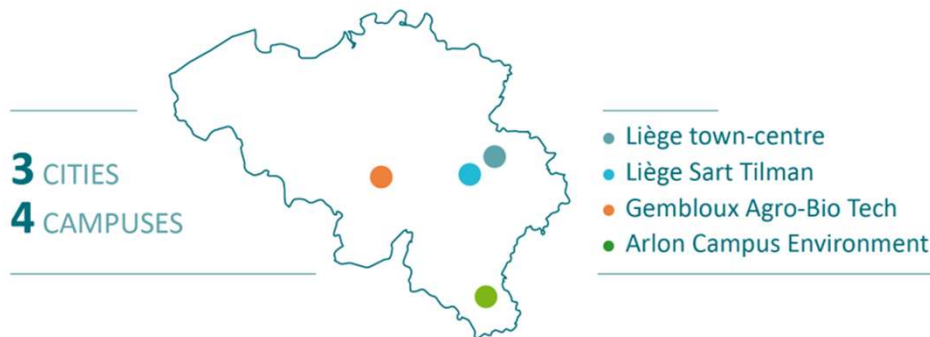
Ensure Ex Libris does not shut down the Primo server before the update is completed.



# Institutional Background

## University of Liège

- Established in 1817
- 24,400 Students
- 5,400 Faculty + Staff
  - 100 Library staff (ca 89 FTE)



### Ex Libris Products:

- Aleph: 2006-2015
- SFX: 2006-2015
- Alma: 2015-....
- Primo:
  - Local : 2013-2015
  - Hosted Classic UI: 2015-Sept 2019
  - **Primo VE**: Sept 2019-...

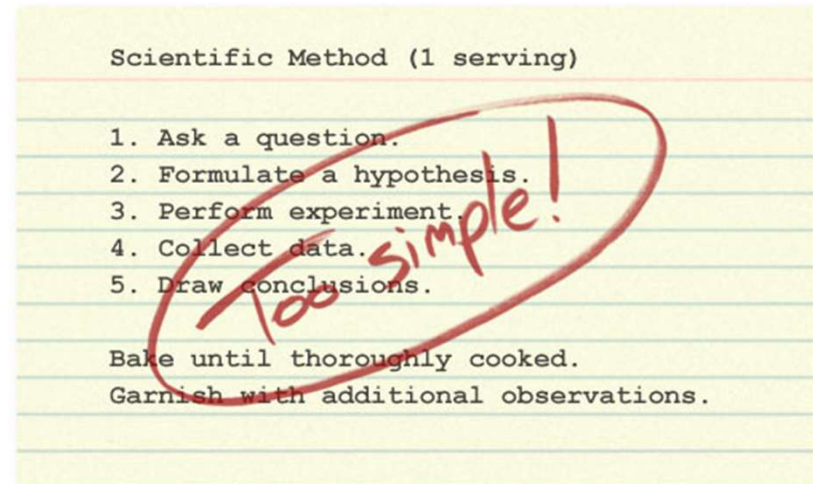


# What's the problem?

- We plan to harvest all Belgian Open Access (institutional) repositories in our Primo VE
    - ca 250,000 OA records
    - some repositories are still missing (ongoing project)
  - Some harvested External Data Sources may contain records in **open**, **restricted**, **embargoed**, and **closed** access.
  - A dedicated set for OA records only is not always provided.
  - And we do not want to display records in our Primo that are not in Open Access.
-

# Investigating

- The owning institution is not willing to create a set with only OA records.
- How can we limit results to OA records only?
- Many trials and errors...



Source: [https://undsci.berkeley.edu/article/howscienceworks\\_01](https://undsci.berkeley.edu/article/howscienceworks_01)



# Solution

- Harvesting all data and removing with NRs records that are not in OA
- By checking if <dc:rights> exists and using information <dc:rights>

```
rule "1 not exist dc:rights"
when
  not exist "dc"."rights"
then
  remove "dc"."description"
  remove "dc"."date"
  remove "dc"."subject"
  remove "dc"."creator"
  remove "dc"."contributor"
  remove "dc"."publisher"
  remove "dc"."type"
  remove "dc"."identifier"
  remove "dc"."language"
  remove "dc"."title"
  remove "dc"."relation"
  remove "dc"."coverage"
  remove "dc"."source"
  remove "dc"."format"
end
```

---

# Solution

```
rule "2 remove all fields when restrictedAccess"
when
  "dc"."rights" equals "info:eu-repo/semantics/restrictedAccess"
then
  remove "dc"."description"
  ...
end
```

```
rule "3 remove all fields when embargoedAccess"
when
  "dc"."rights" equals "info:eu-repo/semantics/embargoedAccess"
then
  remove "dc"."description"
  ...
end
```

```
rule "4 remove all fields when closedAccess"
when
  "dc"."rights" equals "info:eu-repo/semantics/closedAccess"
then
  remove "dc"."description"
  ...
end
```

---

# But two problems

1. If Source format is Dublin Core or XML, then Target format should be Dublin Core, but
    - A logic that works for **dc** records may not be applied to **XML** records
    - Action “**remove**” does not exist in the Normalization Rule syntax for XML (only “set”, “copy”, “concat”)
    - New approach: only copy to dc (target format) what we want to keep from the source
-

# But two problems

- 2) Some records have no linking identifier or parameter in the harvested source -> no way to create a Delivery link

```
▼<GetRecord>
  ▼<record>
    ▼<header>
      <identifier>c:irua:157211</identifier>
      <timestamp>2019-02-20T22:17:20.999997Z</timestamp>
    </header>
    ▼<metadata>
      ▼<dc xmlns:ns2="http://purl.org/dc/terms/"
        xmlns:oai_dc="http://www.openarchives.org/OAI/2.0/oai_dc/"
        xmlns="http://purl.org/dc/elements/1.1/">
        ▼<title>
          Privatskoler truer sammenhængskraft i skrøbelig stat
        </title>
        <creator>Gandrup, Tobias</creator>
        <subject>Sociology</subject>
        <subject>Politics</subject>
        <date>2018</date>
        <rights>info:eu-repo/semantics/openAccess</rights>
        <type>info:eu-repo/semantics/other</type>
        <source>Jyllands-Posten</source>
        <source>0109-1182</source>
        <language>dan</language>
      </dc>
    </metadata>
  </record>
</GetRecord>
```

```
▼<OAI-PMH xmlns="http://www.openarchives.org/OAI/2.0/"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.openarchives.org/OAI/2.0/
    http://www.openarchives.org/OAI/2.0/OAI-PMH.xsd">
  <responseDate>2019-08-20T08:33:34.999997Z</responseDate>
  <request verb="GetRecord" metadataPrefix="oai_dc"
    identifier="c:irua:157210">https://anet.be/oai/abua/server.phtml</request>
  ▼<GetRecord>
    ▼<record>
      ▼<header>
        <identifier>c:irua:157210</identifier>
        <timestamp>2019-02-20T23:06:53.999999Z</timestamp>
      </header>
      ▼<metadata>
        ▼<dc xmlns:ns2="http://purl.org/dc/terms/"
          xmlns:oai_dc="http://www.openarchives.org/OAI/2.0/oai_dc/"
          xmlns="http://purl.org/dc/elements/1.1/">
          ▼<title>
            Militarised approach to wildlife conservation is not sustainable
          </title>
          <creator>Ashaba, Ivan</creator>
          <subject>Sociology</subject>
          <subject>Politics</subject>
          <subject>Biology</subject>
          <date>2018</date>
          <rights>info:eu-repo/semantics/openAccess</rights>
          <type>info:eu-repo/semantics/other</type>
          <identifier>https://hdl.handle.net/10067/1572100151162165141</identifier>
          <source>Daily Monitor</source>
          <language>eng</language>
        </dc>
      </metadata>
    </record>
  </GetRecord>
</OAI-PMH>
```

# Solution

NR for XML records should take these issues into account

- **Red line**: to keep only records in OA
- **Blue line**: to keep only records where Delivery can be configured

```
rule "Copy creator"
when
  exist "//*[local-name()='rights'][contains(., 'info:eu-repo/semantics/openAccess')]"
  exist "//*[local-name()='dc']/*[local-name()='identifier'][contains(., 'http')]"
then
  copy "//*[local-name()='creator']/text()" to "dc"."creator"
end
```

```
rule "Copy title"
when
  exist "//*[local-name()='rights'][contains(., 'info:eu-repo/semantics/openAccess')]"
  exist "//*[local-name()='dc']/*[local-name()='identifier'][contains(., 'http')]"
then
  copy "//*[local-name()='title']/text()" to "dc"."title"
end
```

---

# Top Tip

- Always keep in mind that
    - each External Data Source has its own logic
    - dc sources and generic XML sources may require a different approach
  - Some few NR examples at: [Configuring Normalization Rules for Primo VE](https://knowledge.exlibrisgroup.com/Primo/Product_Documentation/020Primo_VE/045Loading_Records_from_External_Sources_into_Primo_VE/Configuring_Normalization_Rules_for_Primo_VE)  
[https://knowledge.exlibrisgroup.com/Primo/Product\\_Documentation/020Primo\\_VE/045Loading\\_Records\\_from\\_External\\_Sources\\_into\\_Primo\\_VE/Configuring\\_Normalization\\_Rules\\_for\\_Primo\\_VE](https://knowledge.exlibrisgroup.com/Primo/Product_Documentation/020Primo_VE/045Loading_Records_from_External_Sources_into_Primo_VE/Configuring_Normalization_Rules_for_Primo_VE)
  - A Community Knowledge Article with additional examples will be published in September 2019
-

# Institutional Background

## University of Manchester

The University of Manchester Library is at the heart of the UK's largest university, welcoming over three million students, researchers and visitors per year.

Undergrads

27,500

Postgrad taught

8,705

Postgrad research

3,935

Staff

12,695

Library staff

350



# What's the problem?

Before moving to Primo VE we were able to make use of the PNX record to create uplinks and downlinks between parent and child records.

- 2 way searches using the MMS IDs
  - With Primo VE, we lost the traditional “PNX” record and meant we now didn't have a way to search for a parent record and link through to all child record (and vice versa)
  - This was mainly an issue for legacy records catalogued differently
-



## Anglo-Saxon charters.SERIES

British Academy.

 [Check multi-volume set for titles >](#)

TOP

SEND TO

FIND IN LIBRARY

DETAILS

LINKS

TAGS

Send to



EXPORT  
BIBTEX



EXPORT TO  
MENDELEY/  
ZOTERO



EXPORT TO  
REFWORKS



EXPORT TO  
ENDNOTE  
WEB



EXPORT TO  
EASYBIB



PERMALINK



Find in Library

There are no Get It options for this record. This may be because this is a multi-volume collection - click on the link below to the multi-volume set.

There are no services available

If you need help, please just [contact us](#)

Details

Title	Anglo-Saxon charters.SERIES
Author/creator	<a href="#">British Academy.</a> >
Publisher	Oxford : published for the British Academy by the Oxford University Press.
Language	eng
Source	fulldisplay.datasources.Library catalogue
Multi-volume set	<a href="#">DN9913736284401631</a> >

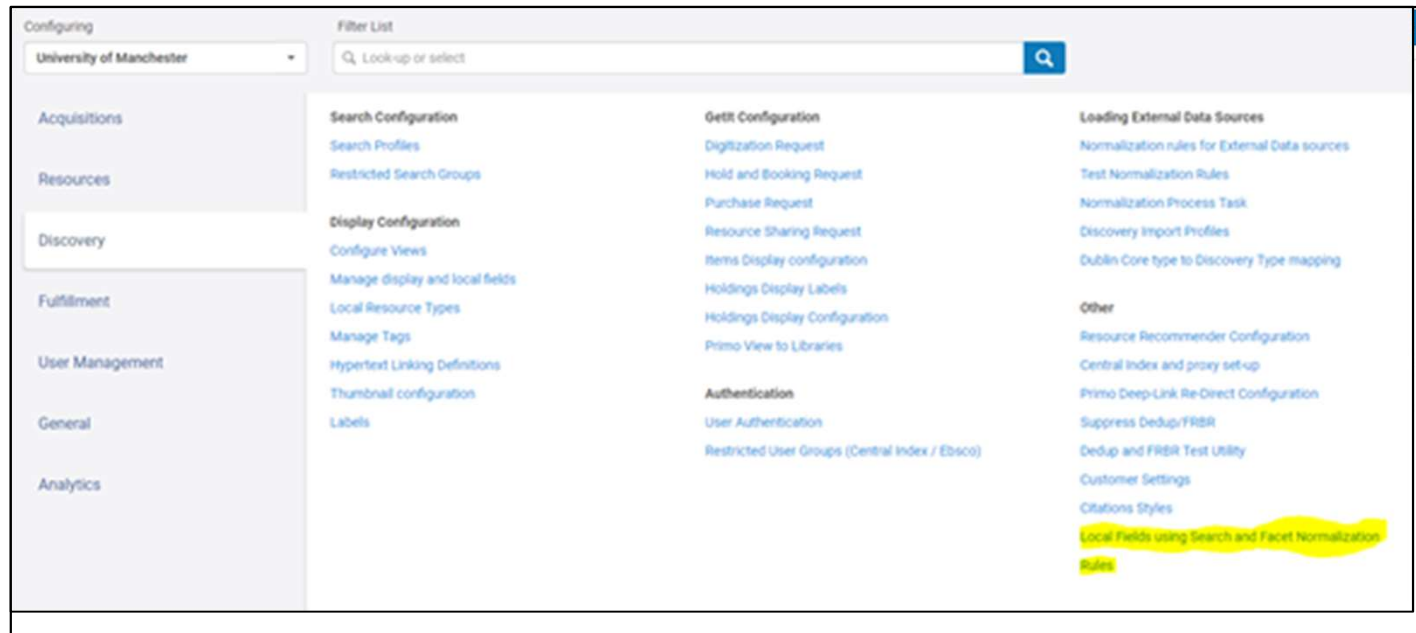
# Investigating

- Display Field - 'Is Part of'
  - This didn't include 773\$w in the OTB mappings
  - This was before you had the option to create display fields for marc fields that were not in the OTB mappings.



# Investigating

- 1. Use **Local Fields using Search and Facet Normalization Rules** (Alma config > Discovery > Other) to create a new local field



# Investigating

- Display and Search norm rule mapped from 905\$a and 773\$w.

```
rule "Primo VE - Lds13"
when
    MARC is "773"."w" AND NOT
rule "Primo VE - Lds13 1"
when
    MARC is "905"."a"
then
    set TEMP"1" to MARC "905"."a"
    add prefix (TEMP"1","Link to full listings")
    remove substring using regex (TEMP"1","[0-9]")
    set TEMP"2" to MARC."905" subfields "a-z" delimited by " OR " remove substring using regex "\\.$"
        add prefix (TEMP"2","$$Q")
        remove substring using regex (TEMP"2","^$$Q$")
        concatenate with delimiter (TEMP"1",TEMP"2",",")
    create pnx."display"."lds13" with TEMP"1"
end
    create pnx."display"."lds13" with TEMP"1"
end
```

---

```
create pnx."search".lsl13 with MARC "905"."a"  
end  
  
rule "Primo VE Marc - Lsl13 1"  
when  
  MARC is "773"."w"  
then  
  create pnx."search".lsl13 with MARC "773"."w"  
end
```

- The rules are then applied, after creating a set in Alma of all parent records, filtered using an indication rule to retrieve all records with 773\$w
- Once set is created, bib records are exported, edited using MarcEdit and then reimported into alma, with a norm rule applied - all in order to copy the 001 to 905 for parent records, and and 773 for child records.

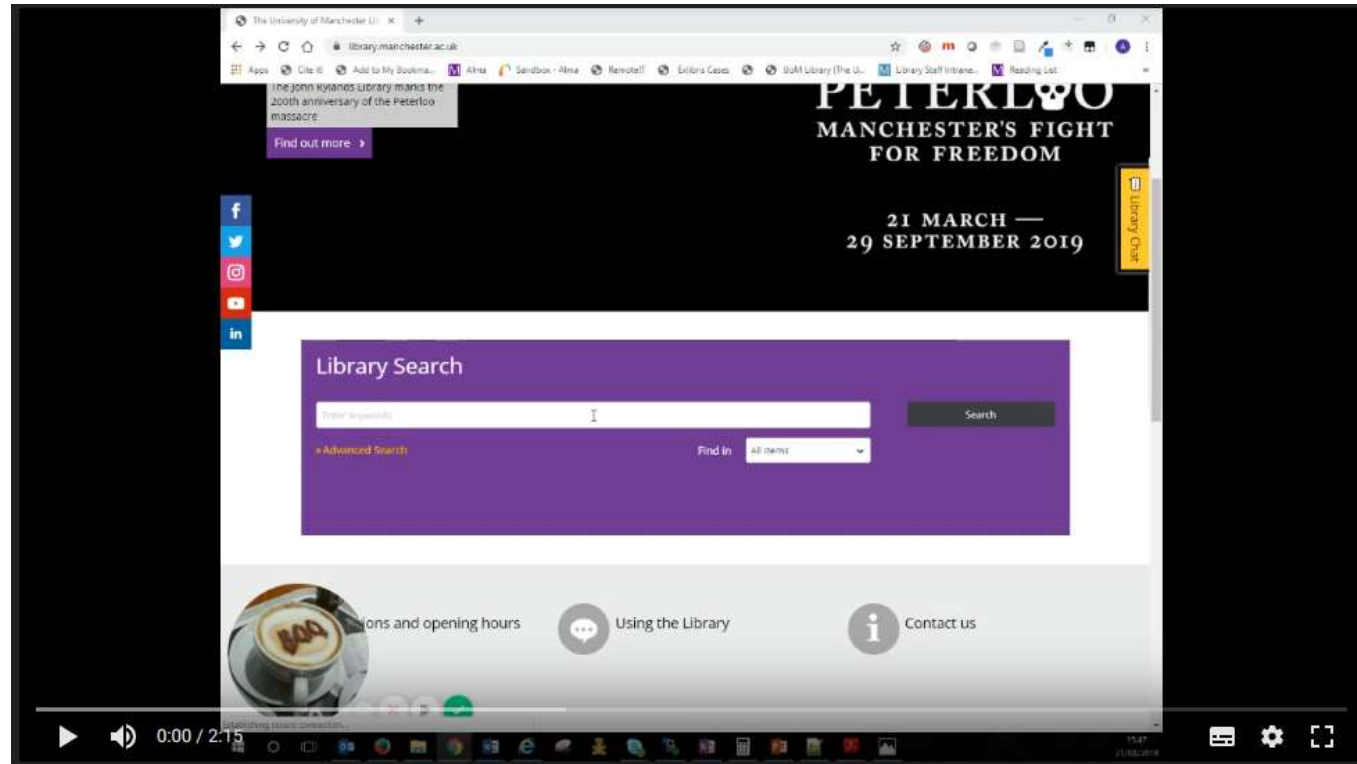
○

# Investigating

- Set up the new local field 'Multi-volume set' to generate a search from a record's full display using Hypertext Linking Definitions (Alma config > Discovery > Hypertext Linking Definitions)
  - Initially this wouldn't allow you to amend the text, and so initial solution was a hyperlinked MMS ID
  - The display field contains the \$\$Q subfield in Primo VE's normalized record for 'Link to full listings'
  - The local field must be configured for Advanced Search
  - Finally, records need to be reindexed (request submitted via salesforce)
-



# Solved?



[https://drive.google.com/file/d/1UNT6c2\\_cXph70Da\\_P10IAIt\\_vOR5g7Uy/view](https://drive.google.com/file/d/1UNT6c2_cXph70Da_P10IAIt_vOR5g7Uy/view)

# Top Tip

- Think about what resources you could use in addition to Alma/Primo OTB functionality, i.e. MarcEdit
- Use the test functionality built into Primo VE to test your NRs, and sandbox to see immediate changes (don't need to run pipes and indexing jobs)
- Thank your colleagues for their amazing work.
  - Amanda Swann - Systems Support Assistant

Salesforces references: 639742 & 689208

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# Questions & Contacts

**Peta Hopkins**, Manager Digital Library Services, Bond University  
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**François Renaville**, Head of Library Systems, University of Liège  
[francois.renaville@uliege.be](mailto:francois.renaville@uliege.be) || @f\_renaville

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